

REMARKS

The office action of April 6, 2007 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Claims 1 through 14 remain in this case, claims 1 and 7 being amended by this response. No new matter has been added. Specifically:

In claims 1 and 7 "digital data" is supported by page 7, line 23 to page 8, line 27; "serial data" is supported by page 8, line 28 to page 9, line 33; "video data" is supported by page 6, line 30 to page 7, line 22, and more specifically, page 7, line 3 of the application as filed.

Claims 1 and 7 have been amended for clarification and to correct antecedent basis.

The numbered paragraphs below correspond to the numbered paragraphs in the Office Action.

Objection to the Specification

1. The Examiner stated that the title of the invention is not descriptive and is requiring a new title indicative of the invention to which the claims are directed.

The title has been amended to "DATA COLLECTION AND RECORDING SYSTEM". Applicant believes that this amendment has fully addressed the Examiner's objection. Reconsideration and withdrawal of the objection are respectfully requested.

Rejection under 35 U.S.C. §102

3. Claims 1, 3-7, and 9-14 were rejected under 35 U.S.C. 102(e) as being anticipated by Kaylor *et al.* (U.S. Pat. App. Pub. No. 2003/0016288). Applicant respectfully disagrees with the rejection.

The Examiner refers to Figure 14 in the Kaylor publication frequently in the Detailed Action. This image is a computer display that illustrates the display of previously recorded video images along with additional data generated by a post-recording review process. In contrast, the Applicant's claimed system collects three types of data: digital data, serial data, and video data as described on page 6, line 30 to page 9, line 33 of the application. An important distinction here is

that the Kaylor system collects only video images and then utilizes post-recording processing to derive additional data elements. The Kaylor text states:

"According to the preferred embodiment, the recorded images are analyzed to extract the data required for the particular application. A software program is provided to permit an operator to view the video images and record the data" [paragraph 0053].

So in Kaylor's solution the data is generated by inputs made by an operator while observing the video. Only after post-recording review do data elements exist. The Kaylor publication does not address the monitoring or recording of any data with the video.

Amended claim 1 includes, in part, "a digital signal capture card for sensing and collecting discrete digital signals as digital data".

Kaylor discloses a multi-camera video collection system with a screen splitter to combine the video images and a recorder to record a single video image with a time and date stamp. Kaylor discloses collecting only video data. Kaylor does not disclose collecting digital data. Video data is not digital data as defined by the Applicant in the present application (see page 6, line 30 to page 8, line 27). Although Kaylor discloses that the recording device (20) may be a video recorder or a computer processor, Kaylor does not disclose any advantage to using a computer processor over a VCR or DVR, because Kaylor records only video data. Kaylor discloses a computer program for analyzing the video data to collect additional data, but this is done indirectly from the video data after the fact and requires a human operator as indicated in paragraph [0057] of the publication. Kaylor does not disclose sensing and collecting discrete digital signals as digital data and does not disclose a digital signal capture card for sensing and collecting discrete digital signals as digital data.

Claim 1 also includes "a multi-port serial port expansion card for sensing and collecting serial digital communication messages as serial data".

The Examiner states that Kaylor discloses "serial messages" in Fig. 14. Kaylor does not monitor or record serial communication messages. The Applicant's "communication messages" describes messages that are transmitted between the computer systems under observation. The

communication channels for these messages are monitored and recorded by the invention of claim 1. The "serial messages" in Figure 14 are not such messages. They are data that has been entered by an operator during post-recording processing. The text of the publication describes it as "the number of cars passing the stop bar during each green light" [paragraph 0055, lines 10-11]. Kaylor discloses collecting only video data. Kaylor does not disclose collecting serial data. Video data is not serial data as defined by the Applicant in the present application (see page 6, line 30 to page 9, line 33). Kaylor does not disclose collecting serial digital communication messages sent between computer systems or a multi-port serial port expansion card for sensing and collecting serial digital communication messages as serial data.

Claim 1 further includes "means for indexing and storing said digital data and video data".

The Examiner states that Kaylor shows in Fig. 14 that the images have been indexed according to time stamps. Kaylor discloses that the date/time is an overlay on the video images, and this can be seen in the video image on the lower left. There is not enough information in the text of the Kaylor publication to know how video images are managed on the display in Figure 14. While a date/time stamp overlay is human-readable, it does not exist in a format that is usable by a computer. Also, Kaylor discloses collecting only video data. Kaylor does not disclose collecting digital data and therefore does not disclose storing digital data as defined by the Applicant. Kaylor does not disclose means for indexing and storing digital data and video data.

Claim 1 also includes "means for relating occurrence of a particular item of a particular data type, whether digital, serial or video, to the most closely time-related data item from the other said data types".

The Examiner states that Kaylor discloses multiple data on the computer screen at once in Fig. 14. Kaylor discloses a computer screen displaying data entered by the reviewer at the time of post recording review. Kaylor does not disclose displaying recorded digital or serial data, because Kaylor does not disclose recording digital or serial data.

Kaylor does not disclose each and every element of Applicant's independent claim 1. Therefore, it is respectfully suggested that the rejection of independent claim 1 as being anticipated by Kaylor *et al.* is overcome. Reconsideration and withdrawal of the rejection of claim 1 are respectfully requested.

Claim 4 includes, in part, "reviewed serial communication data are presented in time-ordered message sequence".

The Examiner states that Kaylor discloses two lists on the left side of Fig. 14 in a time-ordered manner. Kaylor discloses a list of data entered by the reviewer at the time of post recording review. Kaylor does not disclose displaying recorded data, because Kaylor does not disclose recording data.

Claim 5 includes, in part, "reviewed serial communication data are presented as recorded in hexadecimal or ASCII format".

The Examiner states that Kaylor discloses ASCII characters in Fig. 14. The term "communication data" in claim 5 describes messages that are transmitted between computer systems under observation. The communication channels for these messages are monitored and recorded in the invention of claim 5. The claim is stating that recorded messages are presented as recorded regardless of original formatting or encoding (such as hexadecimal or ASCII). Kaylor does not disclose reviewed serial communication data and does not disclose reviewed serial communication data presented as recorded in hexadecimal or ASCII format.

Claim 6 includes, in part, "reviewed serial communication data are translated according to message parsing rules".

The Examiner states that Kaylor discloses information in the correct format in Fig. 14. Claim 6 refers to messages transmitted between computers, not the ability for a computer to display text to its user. Messages between computers are transmitted in various formats and protocols. It may be that the messages are sent in binary or hexadecimal form, or an application specific enumeration, which is not easily readable by a human reviewer. The parsing function in claim 6 refers to the translation of recorded messages to present them to the user in a more

human-readable form. Kaylor does not disclose reviewed serial communication data translated according to message parsing rules.

Claim 13 includes, in part, "serial digital communication messages are transmitted via serial communication port and wherein said digital signals are asserted via a digital input/output card".

The Examiner states that Kaylor discloses a recording device (20) connected to a computer through a cable (39) to view the images. Claim 13 describes the transmission of serial digital communication messages and assertion of discrete signals. The Kaylor cable (39) is coax that runs to a video monitor. Kaylor does not disclose serial digital communication messages transmitted via serial communication port, where digital signals are asserted via a digital input/output card.

Dependent claims 3-6 and 13-14, being dependent upon and further limiting independent claim 1, should also be allowable for that reason, as well as for the additional recitations they contain. Reconsideration and withdrawal of the rejection of claims 1, 3-6, and 13-14 are respectfully requested.

Claim 7 includes, in part, "means for sensing and collecting discrete digital signals as digital data" and "means for indexing and storing said digital signals".

Kaylor discloses a multi-camera video collection system with a screen splitter to combine the video images and a recorder to record a single video image with a time and date stamp. Kaylor discloses collecting only video data. Kaylor does not disclose collecting digital data. Video data is not digital data as defined by the Applicant in the present application (see page 6, line 30 to page 8, line 27). Although Kaylor discloses that the recording device (20) may be a video recorder or a computer processor, Kaylor does not disclose any advantage to using a computer processor over a VCR or DVR, because Kaylor records only video data. Kaylor discloses a computer program for analyzing the video data to collect additional data, but this is done indirectly from the video data after the fact and requires a human operator as indicated in paragraph [0057] of the publication. Kaylor discloses that the date/time is an overlay on the video images, and this can be seen in the video image on the lower left. There is not enough

information in the text of the Kaylor publication to know how video images are managed on the display in Figure 14. While a date/time stamp overlay is human-readable, it does not exist in a format that is usable by a computer. Kaylor does not disclose means for sensing and collecting discrete digital signals as digital data and does not disclose means for indexing and storing digital data.

Claim 7 also includes "means for sensing and collecting serial digital communication messages as serial data" and "means for indexing and storing said serial messages".

The Examiner states that Kaylor discloses "serial messages" in Fig. 14. Kaylor does not monitor or record serial communication messages. The Applicant's "communication messages" describes messages that are transmitted between the computer systems under observation. The communication channels for these messages are monitored and recorded by the invention of claim 1. The "serial messages" in Figure 14 are not such messages. They are data that has been entered by an operator during post-recording processing. The text of the publication describes it as "the number of cars passing the stop bar during each green light" [paragraph 0055, lines 10-11]. Kaylor discloses collecting only video data. Kaylor does not disclose collecting serial data. Video data is not serial data as defined by the Applicant in the present application (see page 6, line 30 to page 9, line 33). Kaylor does not disclose means for sensing and collecting serial digital communication messages as serial data or means for indexing and storing serial messages.

Claim 7 further includes "means for relating occurrence of a particular item of a particular data type, whether digital, serial or video, to the most closely time-related data item from the other said data types, retrieving and displaying said time-related data items, according to data the type and data item directed by a user".

The Examiner states that Kaylor discloses multiple data on the computer screen at once in Fig. 14. Kaylor discloses a computer screen displaying data entered by the reviewer at the time of post recording review. Kaylor does not disclose displaying recorded digital or serial data, because Kaylor does not disclose recording digital or serial data. Kaylor also does not disclose means for relating occurrence of a particular item of a particular data type, whether digital, serial or video, to the most closely time-related data item from the other data types, retrieving and

displaying the time-related data items, according to data the type and data item directed by a user.

Kaylor does not disclose each and every element of Applicant's independent claim 7. Therefore, it is respectfully suggested that the rejection of independent claim 7 as being anticipated by Kaylor *et al.* is overcome. Reconsideration and withdrawal of the rejection of claim 7 are respectfully requested.

Claim 10 includes, in part, "reviewed serial communication data are presented in time-ordered message sequence".

The Examiner states that Kaylor discloses two lists on the left side of Fig. 14 in a time-ordered manner. Kaylor discloses a list of data entered by the reviewer at the time of post recording review. Kaylor does not disclose displaying recorded data, because Kaylor does not disclose recording data.

Claim 11 includes, in part, "reviewed serial communication data are presented as recorded in hexadecimal or ASCII format".

The Examiner states that Kaylor discloses ASCII characters in Fig. 14. The term "communication data" in claim 11 describes messages that are transmitted between computer systems under observation. The communication channels for these messages are monitored and recorded in the invention of claim 11. The claim is stating that recorded messages are presented as recorded regardless of original formatting or encoding (such as hexadecimal or ASCII). Kaylor does not disclose reviewed serial communication data and does not disclose reviewed serial communication data presented as recorded in hexadecimal or ASCII format.

Claim 12 includes, in part, "reviewed serial communication data are translated according to message parsing rules".

The Examiner states that Kaylor discloses information in the correct format in Fig. 14. Claim 12 refers to messages transmitted between computers, not the ability for a computer to display text to its user. Messages between computers are transmitted in various formats and protocols. It may be that the messages are sent in binary or hexadecimal form, or an application

specific enumeration, which is not easily readable by a human reviewer. The parsing function in claim 12 refers to the translation of recorded messages to present them to the user in a more human-readable form. Kaylor does not disclose reviewed serial communication data translated according to message parsing rules.

Dependent claims 9-12, being dependent upon and further limiting independent claim 7, should also be allowable for that reason, as well as for the additional recitations they contain.

Reconsideration and withdrawal of the rejection of claims 7 and 9-12 are respectfully requested.

Rejection under 35 U.S.C. §103

4. Claims 2 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kaylor *et al.* (U.S. Pat. App. Pub. No. 2003/0016288) in view of Auty *et al.* (U.S. Pat. No. 5,809,161).

Applicant respectfully disagrees with the rejection. The argument regarding the novelty of claim 1, upon which claim 2 depends, and claim 7, upon which claim 8 depends, over Kaylor is incorporated herein by reference.

Amended claim 1, upon which claim 2 depends, includes, in part, "a digital signal capture card for sensing and collecting discrete digital signals as digital data".

Kaylor teaches a multi-camera video collection system with a screen splitter to combine the video images and a recorder to record a single video image with a time and date stamp.

Kaylor teaches collecting only video data. Kaylor does not teach or suggest collecting digital data. Video data is not digital data as defined by the Applicant in the present application (see page 6, line 30 to page 8, line 27). Although Kaylor teaches that the recording device (20) may be a video recorder or a computer processor, Kaylor does not teach or suggest any advantage to using a computer processor over a VCR or DVR, because Kaylor records only video data.

Kaylor teaches a computer program for analyzing the video data to collect additional data, but this is done indirectly from the video data after the fact and requires a human operator as indicated in paragraph [0057] of the publication. Kaylor does not teach or suggest sensing and collecting discrete digital signals as digital data and does not teach or suggest a digital signal capture card for sensing and collecting discrete digital signals as digital data.

Auty does not provide what Kaylor lacks. Auty teaches a vehicle monitoring system. Although Auty teaches that information can be automatically extracted from the acquired video data, Auty, like Kaylor, teaches recording only video data. Auty does not teach or suggest sensing and collecting discrete digital signals as digital data and does not teach or suggest a digital signal capture card for sensing and collecting discrete digital signals as digital data.

Claim 1 also includes "a multi-port serial port expansion card for sensing and collecting serial digital communication messages as serial data".

The Examiner states that Kaylor teaches "serial messages" in Fig. 14. Kaylor does not monitor or record serial communication messages. The Applicant's "communication messages" describes messages that are transmitted between the computer systems under observation. The communication channels for these messages are monitored and recorded by the invention of claim 1. The "serial messages" in Figure 14 are not such messages. They are data that has been entered by an operator during post-recording processing. The text of the publication describes it as "the number of cars passing the stop bar during each green light" [paragraph 0055, lines 10-11]. Kaylor teaches collecting only video data. Kaylor does not teach or suggest collecting serial data. Video data is not serial data as defined by the Applicant in the present application (see page 6, line 30 to page 9, line 33). Kaylor does not teach or suggest collecting serial digital communication messages sent between computer systems or a multi-port serial port expansion card for sensing and collecting serial digital communication messages as serial data. Auty also does not monitor or record serial communication messages. Auty does not teach or suggest collecting serial digital communication messages sent between computer systems or a multi-port serial port expansion card for sensing and collecting serial digital communication messages as serial data.

Claim 1 further includes "means for indexing and storing said digital data".

The Examiner states that Kaylor shows in Fig. 14 that the images have been indexed according to time stamps. Kaylor teaches that the date/time is an overlay on the video images, and this can be seen in the video image on the lower left. There is not enough information in the text of the Kaylor publication to know how video images are managed on the display in Figure 14. While a date/time stamp overlay is human-readable, it does not exist in a format that is

usable by a computer. Kaylor does not teach or suggest means for indexing and storing digital data. Auty also does not teach or suggest recording digital data and does not teach or suggest means for indexing and storing digital data.

Claim 1 also includes "means for relating occurrence of a particular item of a particular data type, whether digital, serial or video, to the most closely time-related data item from the other said data types".

The Examiner states that Kaylor teaches data on the computer screen at once in Fig. 14. Kaylor teaches a computer screen displaying data entered by the reviewer at the time of post recording review. Kaylor does not teach or suggest displaying recorded digital or serial data, because Kaylor does not teach or suggest recording digital or serial data. Auty also does not teach or suggest displaying recorded digital or serial data, because Auty does not teach or suggest recording digital or serial data.

Therefore, it is respectfully suggested that independent claim 1 is not obvious over Kaylor or Auty, alone or in combination. Dependent claim 2, being dependent upon and further limiting independent claim 1, should also be allowable for that reason, as well as for the additional recitations it contains. Reconsideration and withdrawal of the rejection of claim 2 are respectfully requested.

Claim 7, upon which claim 8 depends, includes, in part, "means for sensing and collecting discrete digital signals as digital data" and "means for indexing and storing said digital signals".

Kaylor teaches a multi-camera video collection system with a screen splitter to combine the video images and a recorder to record a single video image with a time and date stamp. Kaylor teaches collecting only video data. Kaylor does not teach or suggest collecting digital data. Video data is not digital data as defined by the Applicant in the present application (see page 6, line 30 to page 8, line 27). Although Kaylor teaches that the recording device (20) may be a video recorder or a computer processor, Kaylor does not teach or suggest any advantage to using a computer processor over a VCR or DVR, because Kaylor records only video data. Kaylor teaches a computer program for analyzing the video data to collect additional data, but

this is done indirectly from the video data after the fact and requires a human operator as indicated in paragraph [0057] of the publication. Kaylor does not teach or suggest sensing and collecting discrete digital signals as digital data and does not teach or suggest a digital signal capture card for sensing and collecting discrete digital signals as digital data.

Auty does not provide what Kaylor lacks. Auty teaches a vehicle monitoring system. Although Auty teaches that information can be automatically extracted from the acquired video data, Auty, like Kaylor, teaches recording only video data. Auty does not teach or suggest means for sensing and collecting discrete digital signals as digital data and does not teach or suggest means for indexing and storing digital data.

Claim 7 also includes "means for sensing and collecting serial digital communication messages as serial data" and "means for indexing and storing said serial messages".

The Examiner states that Kaylor teaches "serial messages" in Fig. 14. Kaylor does not monitor or record serial communication messages. The Applicant's "communication messages" describes messages that are transmitted between the computer systems under observation. The communication channels for these messages are monitored and recorded by the invention of claim 1. The "serial messages" in Figure 14 are not such messages. They are data that has been entered by an operator during post-recording processing. The text of the publication describes it as "the number of cars passing the stop bar during each green light" [paragraph 0055, lines 10-11]. Kaylor teaches collecting only video data. Kaylor does not teach or suggest collecting serial data. Video data is not serial data as defined by the Applicant in the present application (see page 6, line 30 to page 9, line 33). Kaylor does not teach or suggest means for sensing and collecting serial digital communication messages as serial data or means for indexing and storing serial messages. Auty also does not teach or suggest monitoring or recording serial communication messages and does not teach or suggest means for sensing and collecting serial digital communication messages as serial data or means for indexing and storing serial messages.

Claim 7 further includes "means for relating occurrence of a particular item of a particular data type, whether digital, serial or video, to the most closely time-related data item from the other said data types, retrieving and displaying said time-related data items, according to data type and data item directed by a user".

The Examiner states that Kaylor teaches data on the computer screen at once in Fig. 14. Kaylor teaches a computer screen displaying data entered by the reviewer at the time of post recording review. Kaylor does not teach or suggest displaying recorded digital or serial data, because Kaylor does not teach or suggest recording digital or serial data. Kaylor also does not teach or suggest means for relating occurrence of a particular item of a particular data type, whether digital, serial or video, to the most closely time-related data item from the other data types, retrieving and displaying the time-related data items, according to data the type and data item directed by a user. Auty also does not teach or suggest displaying recorded digital or serial data, because Auty does not teach or suggest recording digital or serial data. Auty does not teach or suggest means for relating occurrence of a particular item of a particular data type, whether digital, serial or video, to the most closely time-related data item from the other data types, retrieving and displaying the time-related data items, according to data the type and data item directed by a user.

Therefore, it is respectfully suggested that independent claim 7 is not obvious over Kaylor or Auty, alone or in combination. Dependent claim 8, being dependent upon and further limiting independent claim 7, should also be allowable for that reason, as well as for the additional recitations it contains. Reconsideration and withdrawal of the rejection of claim 8 are respectfully requested.

Conclusion

Applicant believes the claims, as amended, are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully requested. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, she is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

Respectfully Submitted:
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